Independent Peer Review Panel

Evaluation of Proposed Seismic Hazard Studies at Diablo Canyon

Assembly Bill (AB) 1632 (Blakeslee, 2006) directed the California Energy Commission (CEC) to assess the potential vulnerability of California's largest baseload power plants to a major disruption due to a major seismic event and other issues. In response to AB 1632, the CEC issued its findings and recommendations in its AB 1632 Report.

The CEC AB1632 report (2008) recommended that "PG&E should use three-dimensional geophysical seismic reflection mapping and other advanced techniques to explore fault zones near Diablo Canyon "

The California Public Utilities Commission has convened its own Independent Peer Review Panel (IPRP) and invited the CEC, the California Geologic Survey, the California Coastal Commission, the California Seismic Safety Commission, the California Emergency Management Agency and the County of San Luis Obispo to participate on the panel. The IPRP is conducting an independent review of PG&E's on-shore and off-shore seismic studies including independently reviewing and commenting on PG&E's study plans and findings. The IPRP's goal is to provide recommendations for studies to further refine our understanding of the potential seismic hazard at DCPP.

Object of study	PG&E Study Plans	IPRP Evaluation of PG&E Study Plans	Priority/Status
Hosgri Fault Slip Rate	Low Energy 3-D Seismic Survey	The IPRP recommends further studies to decrease the uncertainty in the seismic hazard at Diablo Canyon by better constraining the slip rate on the Hosgri Fault.	High/ Recommended
Los Osos Fault Dip	High Energy on-land 2-D Seismic Survey	The current plans for on-land seismic surveys appear to be adequate to image reverse faults beneath the hills. The IPRP will be interested in reviewing the results that show the Los Osos Fault, but also any other geologic structure or structures beneath the hills.	High/ Awaiting results of surveys in 2011
Los Osos Sense of Slip Los Osos Slip Rate	DCPP*	The IPRP believes that a broader goal of the on-land seismic surveys should be for PG&E to develop a tectonic model of the Irish Hills that includes defining the locations and slip rates on all faults beneath the hills that can be checked against rates of uplift and surface deformation.	High/ Awaiting results of surveys in 2011
Shoreline Fault Slip Rate	Low Energy 3-D Seismic Survey	The IPRP recommends further studies to decrease the uncertainty in the seismic hazard at Diablo Canyon by better constraining the slip rate on the Shoreline Fault.	High/ More Recommended
Southeast End of Shoreline Fault		This type of study has as good a chance as currently feasible of providing data on the orientation and continuity of the southeast end of the Shoreline Fault. The IPRP recommends that a secondary focus of these studies should be to constrain any potential connections to faults on-shore.	Moderate/ More Recommended
Hosgri – Shoreline Intersection	High Energy 3-D Seismic Survey	This type of study has as good a chance as currently feasible of providing data on the intersection of the Hosgri and Shoreline Faults.	Moderate/ CCC permit denied
Hosgri Dip		This type of study has as good a chance as currently feasible of providing data on the dip the Hosgri Fault near the intersection of the Shoreline and the Hosgri Faults.	Moderate/ CCC permit denied
Shoreline Fault Segments		This type of study has as good a chance as currently feasible of providing data on the orientation and continuity of the Shoreline Fault at depth	Moderate/ CCC permit denied
Hosgri- San Simeon Step-Over		Ongoing investigation and more closely spaced seismic survey lines by USGS have shown that the direct connection between the San Simeon and Hosgri Faults is by far the most likely explanation from the available data. It appears very unlikely that additional data from high energy survey of this area would significantly change the seismic hazard analysis results based on these faults.	Low/ No longer proposed

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A multi-agency panel of seismic hazard specialists established by the California Public Utilities Commission

CALIFORNIA GEOLOGICAL SURVEY, CALIFORNIA COASTAL COMMISSION
CALIFORNIA EMERGENCY MANAGEMENT AGENCY, CALIFORNIA ENERGY COMMISSION
CALIFORNIA SEISMIC SAFETY COMMISSION, CALIFORNIA PUBLIC UTILITIES COMMISSION
COUNTY OF SAN LUIS OBISPO